JVC

SERVICE MANUAL

MODEL A-X1

STEREO INTEGRATED AMPLIFIER Super-A

No. 2506
MAR. 1980

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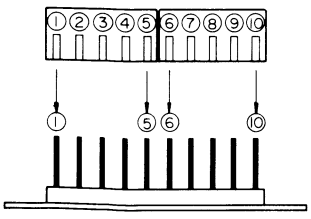
Warning:
When placing the parts marked with ⚠ , be sure to use the designated parts to ensure safety.

1. Specifications

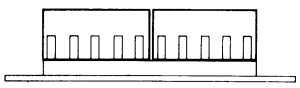
Output Power (Both Channels driven)	: 30 watts per channel, min. RMS into 8 Ω from 20 Hz to 20 kHz with no more than 0.007 % T.H.D. 31 watts per channel into 8 Ω at 1 kHz.
Total Harmonic Distortion	: 0.007 % at Rated output, from 20 Hz to 20 kHz, 8 Ω 0.003 % at Rated output at 1 kHz, 8 Ω
Intermodulation Distortion	: 0.007 % at Rated output, 8 Ω
Power Band Width	: 10 Hz – 30 kHz (IHF, both channels driven, 8 Ω, 0,02 % THD)
Frequency Response	: 10 Hz – 100 kHz $^{+0.5\ dB}_{-3\ dB}$
Dumping Factor	: 50 (1 kHz, 8 Ω)
Tone Controls	
BASS	: 100 Hz ±8 dB
TREBLE	: 10 kHz ±8 dB
Input Sensitivity/ Impedance	
Phono	: 2.5 mV/47 kΩ
TUNER, AUX, TAPE	: 150 mV/40 kΩ
Rec. Output Level	: 150 mV
Phono Equalizer Deviation	: ±0,5 dB (20 Hz – 15 kHz)
Phono Overload	: 150 mV (1 kHz)
Signal to Noise Ratio	
Phono	: 73 dB (new IHF)
TUNER, AUX, TAPE	: 77 dB (new IHF)
Loudness Control (Volume Control at -30 dB position)	: +6 dB at 100 Hz +4 dB at 10 kHz
Dimensions	: 4-11/16"(H) x 16-1/2"(W) x 12-5/16"(W) (12 cm x 42 cm x 32.9 cm)
Weight	: 12.l lbs (5.5 kg)

2. Proper Connections of Power LED Indicators



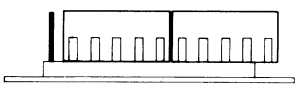
Connecting the both plugs . . . (The numbers and color code-ward of wires are indicated on a surface of socket, see Fig. 1A.)

Fig. 1B



Proper Connection

Fig. 1C



Wrong Connection (damage to LED Indicator)

Fig. 1D

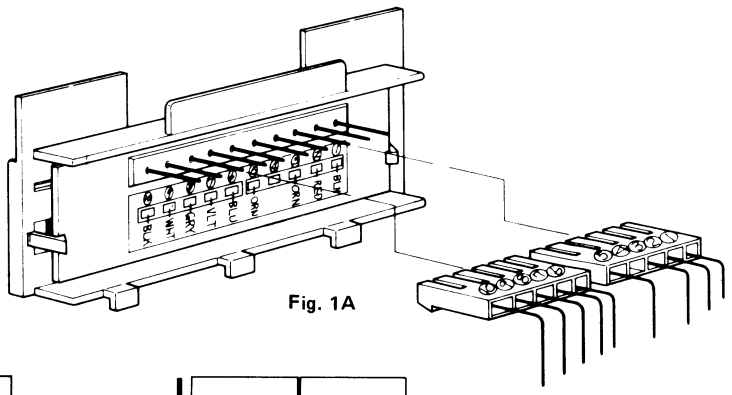


Fig. 1A

3. Main Parts Locations

3-(1) Top View

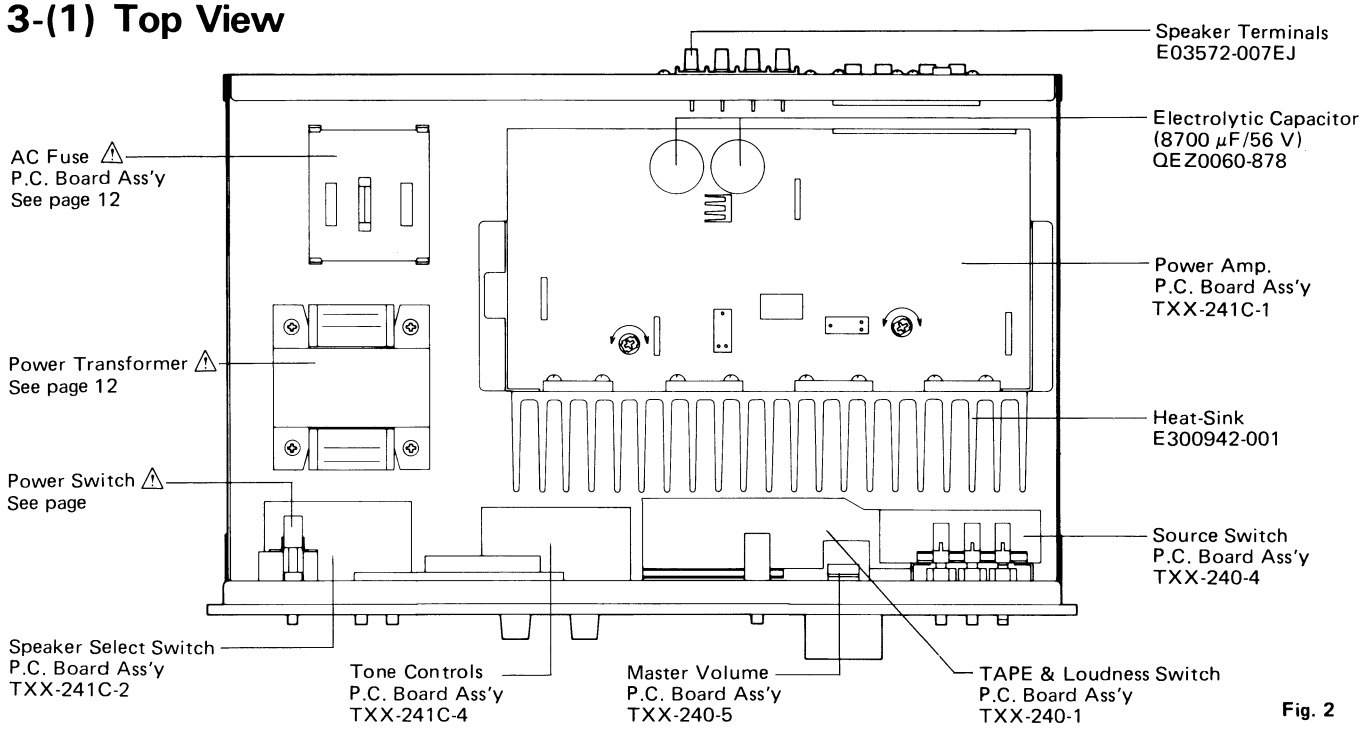


Fig. 2

3-(2) Front View

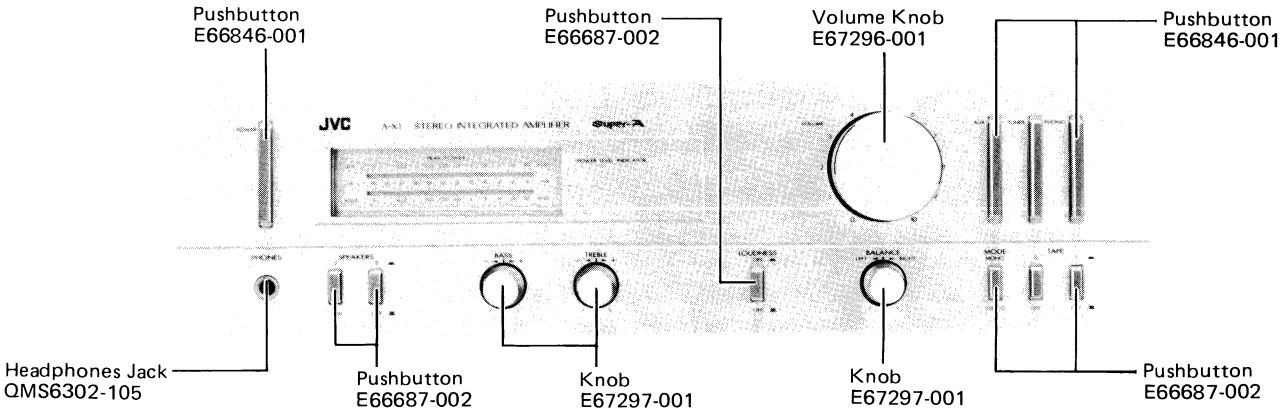


Fig. 3

3-(3) Rear View

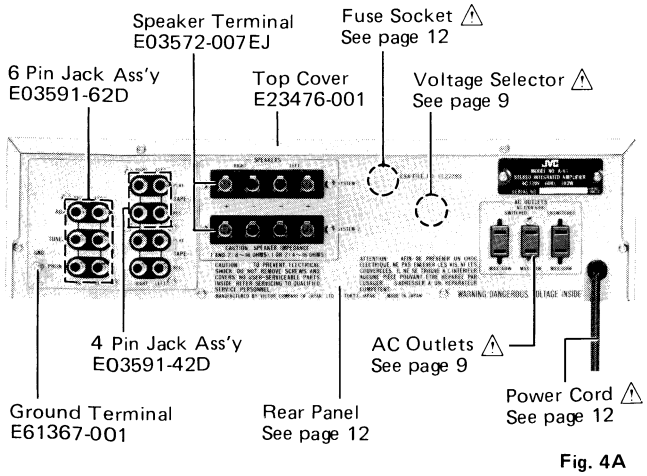


Fig. 4A

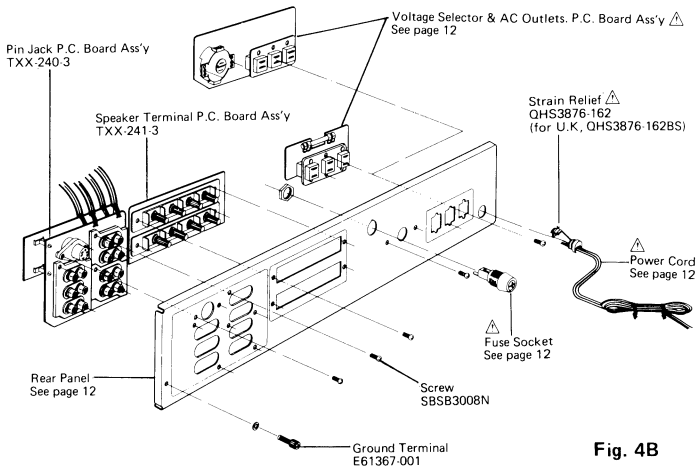
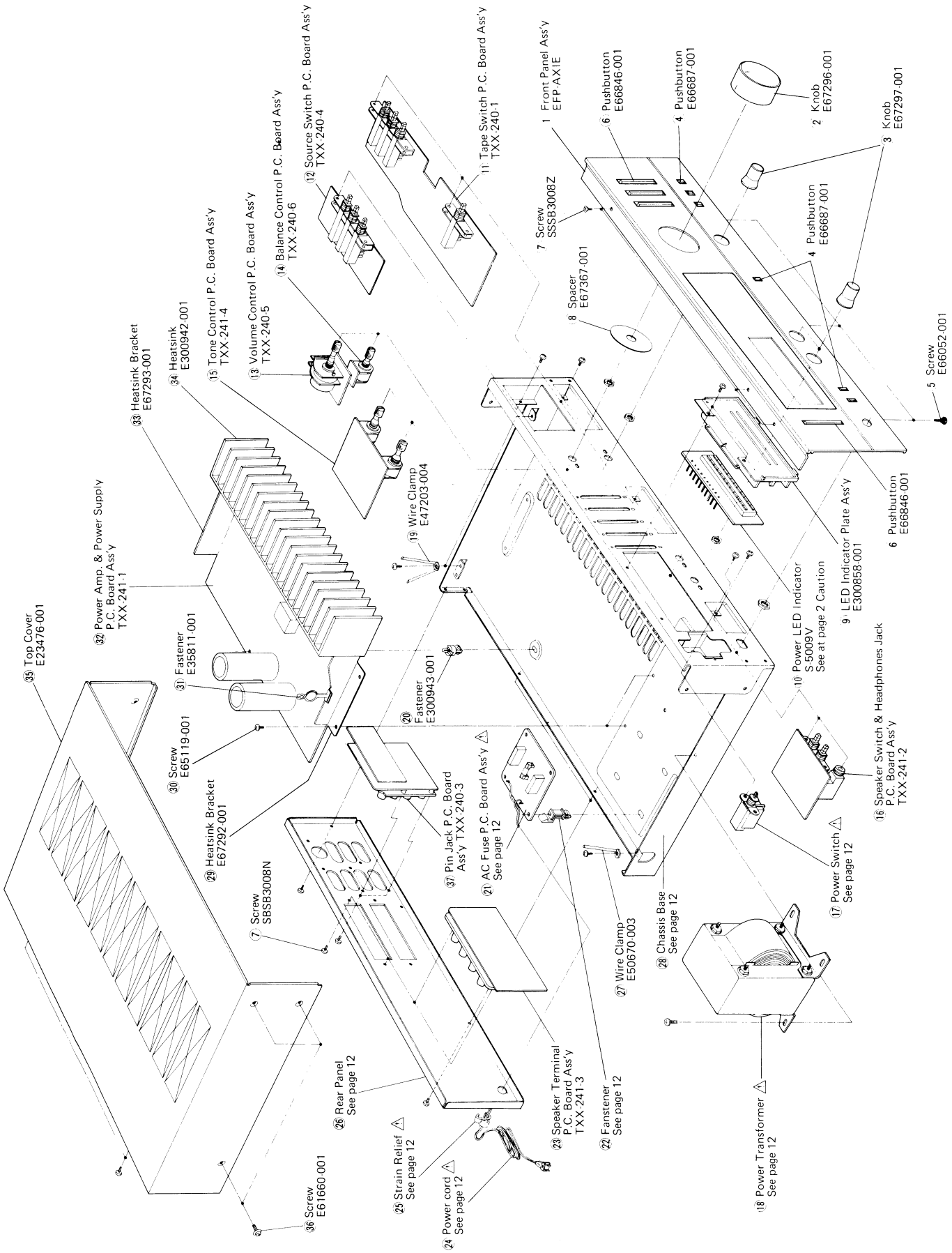


Fig. 4B

⚠ : Safety parts

4. Exploded View


1 Front Panel Ass'y EFP-AXIE
2 Knob E67296-001
3 Knob E67297-001
4 Pushbutton E66687-001
5 Screw E66052-001
6 Pushbutton E66846-001
7 Screw SSSB3008Z
8 Spacer E67367-001
9 LED Indicator Plate Ass'y E300858-001
10 Power LED Indicator S-5009V See at page 2 Caution
11 Tape Switch P.C. Board Ass'y TXX-240-1
12 Source Switch P.C. Board Ass'y TXX-240-4
13 Volume Control P.C. Board Ass'y TXX-240-5
14 Balance Control P.C. Board Ass'y TXX-240-6
15 Tone Control P.C. Board Ass'y TXX-241-4
16 Speaker Switch & Headphones Jack P.C. Board Ass'y TXX-241-2
17 Power Switch ⚠ See page 12
18 Power Transformer ⚠ See page 12
19 Wire Clamp E47203-004
20 Fastener E300943-001
21 AC Fuse P.C. Board Ass'y ⚠ See page 12
22 Fanstener See page 12
23 Speaker Terminal P.C. Board Ass'y TXX-241-3
24 Power cord ⚠ See page 12
25 Strain Relief ⚠ See page 12
26 Rear Panel See page 12
27 Wire Clamp E50670-003
28 Chassis Base See page 12
29 Heatsink Bracket E67292-001
30 Screw E65119-001
31 Fastener E35811-001
32 Power Amp. & Power Supply P.C. Board Ass'y TXX-241-1
33 Heatsink Bracket E67293-001
34 Heatsink E300942-001
35 Top Cover E23476-001
36 Screw E61660-001
37 Pin Jack P.C. Board Ass'y TXX-240-3
7 Screw SBSB3008N

⚠ : Safety parts

Fig. 5

5. Block Diagram

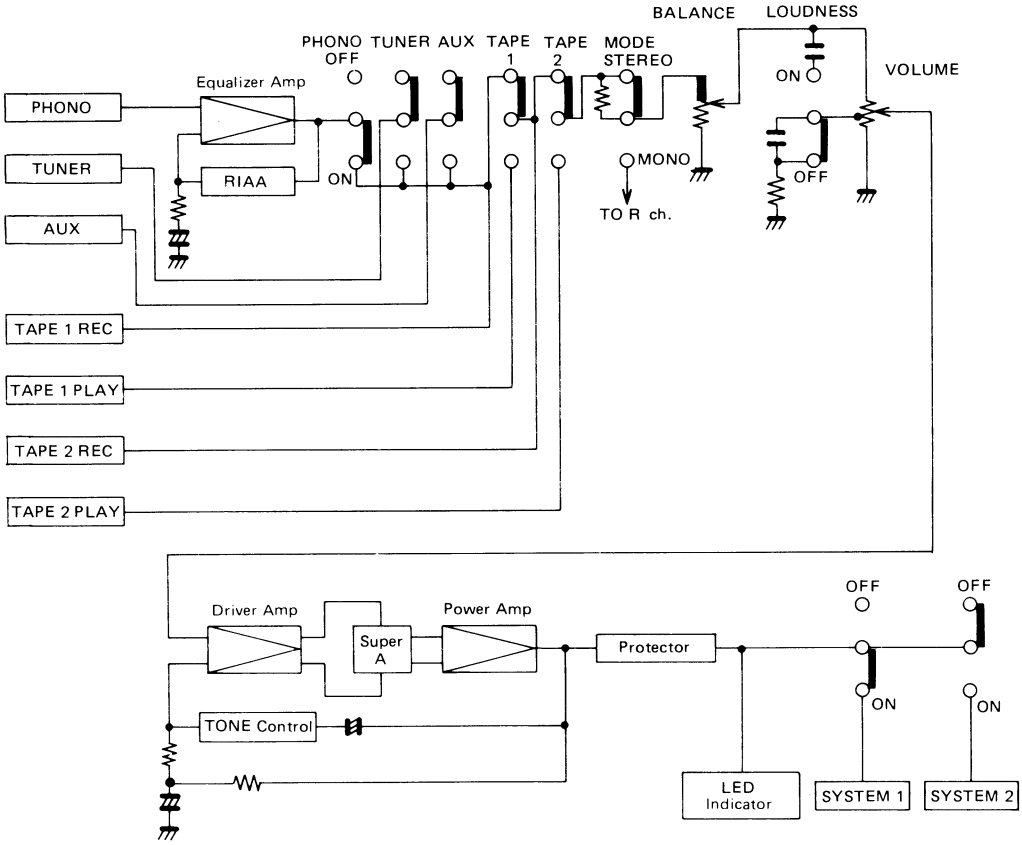


Fig. 6

6. New Technology of IC in Super A Circuit

A newly developed IC has been employed in the heart of the super A bias circuit, thereby simplifying the circuit and improving its performance and reliability. Since the circuit operation remains entirely the same as the conventional circuit, please refer to page 7 "Power Amplifying Section of Super A System" of the A-X5 service manual (No. 2479).

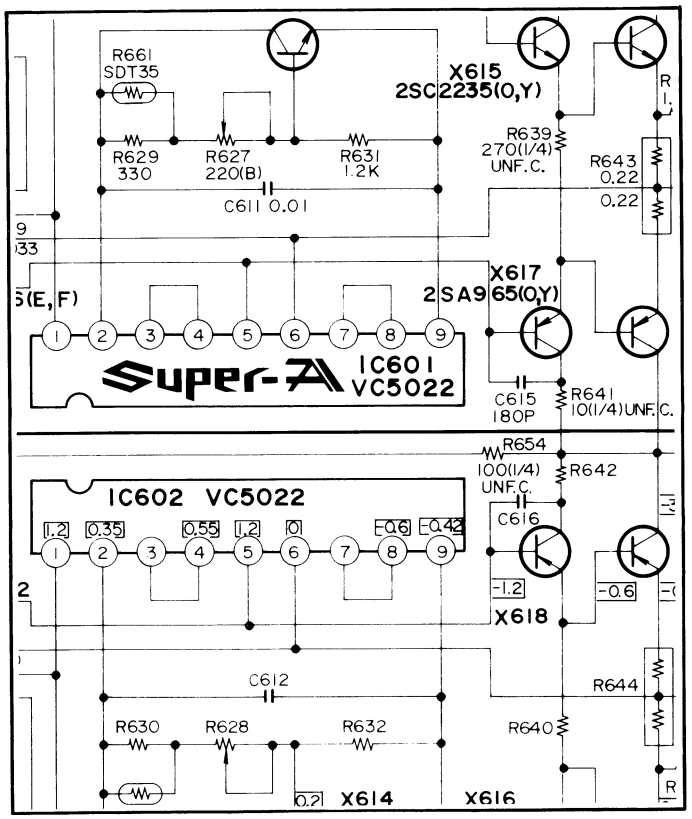


Fig. 7

7. Power Amplifier Idling Current Adjustment Procedure

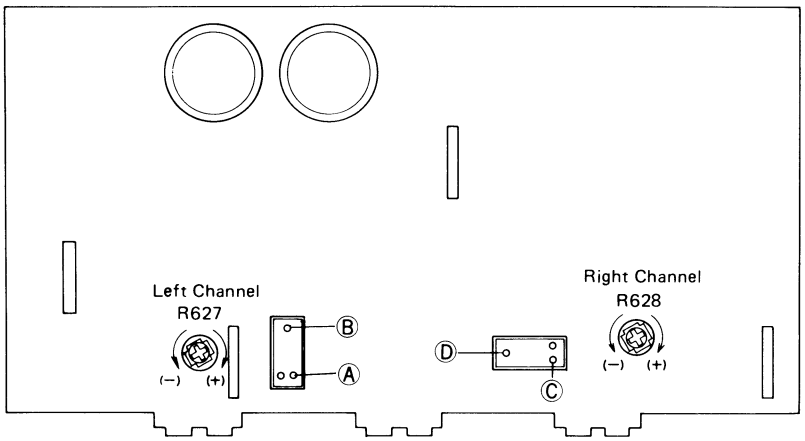


Fig. 8

1. Before turning on the power, turn the semi-fixed resistors <R627 for L channel and R628 for R channel> of the power amplifier circuit board fully counterclockwise.
2. Adjust the semi-fixed resistors (R627 and R628) so that the voltage at the following test points of the power amplifier circuit board is within a range of 10 mV – 14 mV after the power is turned on.
   L channle: Measure the voltage between test point Ⓐ (emitter of X619) and output at the test point Ⓑ.
   R channel: Measure the voltage between test point Ⓒ (emitter of X620) and output at the test point Ⓓ.
3. Readjust resistors R627 and R628 about 5 minutes after the power is turned on (the heat sink temperature must be sufficiently high) so that the voltage at the test points becomes 12 mV.
   Confirm that the voltage does not vary when the heat sink temperature increases further.
   Note: Be sure to perform the measurement with the probes and cabinet of the measuring equipment separated from the grounding terminals of A-X1 or of other measuring equipment.

8. Printed Circuit Board Ass'y and Parts List

8-(1) TXX-241C Power Amp., Volume Control & Other Functions Split P.C. Board Ass'y

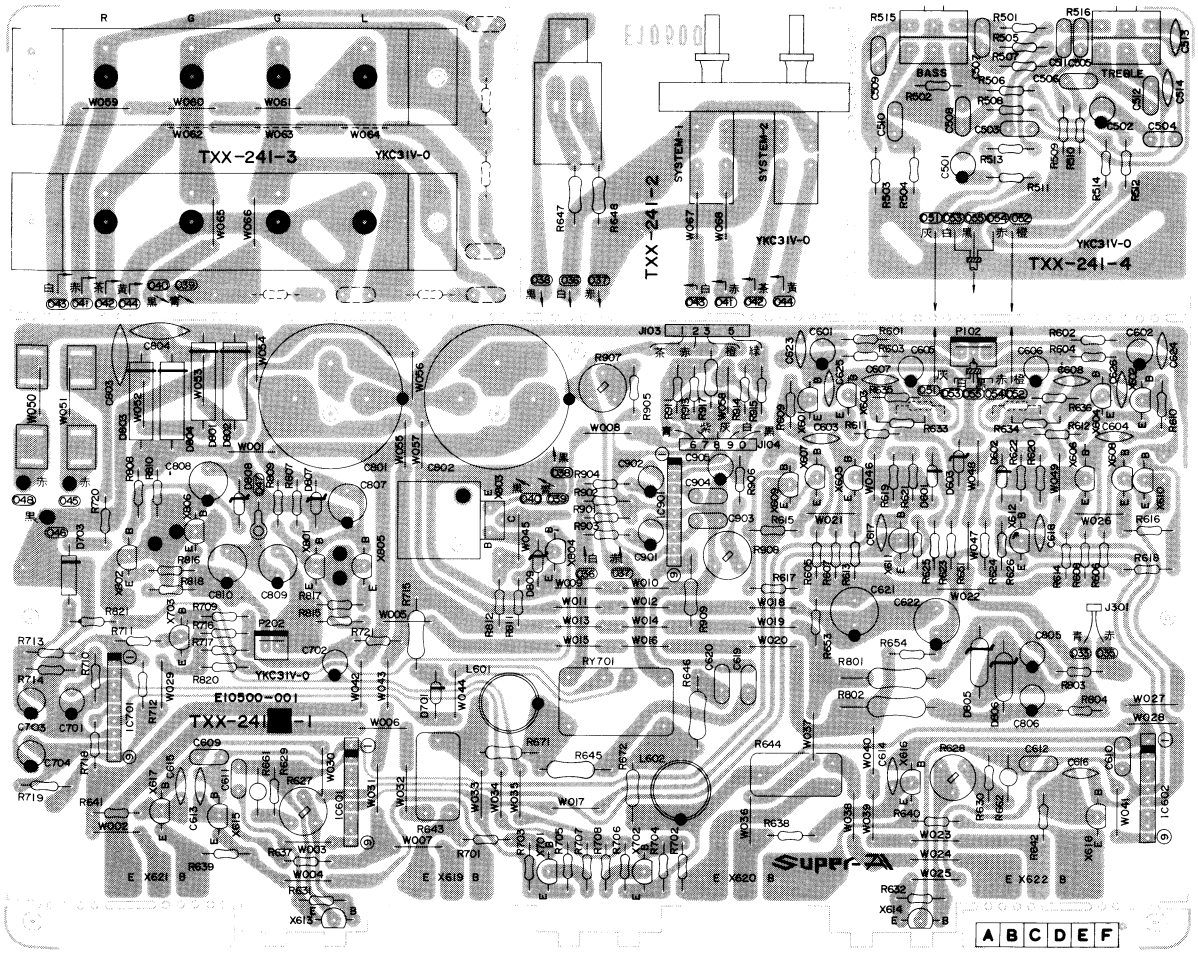


Fig. 9

Each individual P.C. Board Location

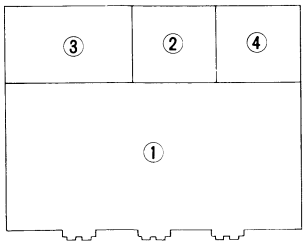


Fig. 10

① TXX-241C-1 : Power Amp. P.C. Board Ass'y
② TXX-241C-2 : Speaker Select Switch & Headphones P.C. Board Ass'y
③ TXX-241C-3 : Speaker Terminal P.C. Board Ass'y
④ TXX-241C-4 : Tone Control P.C. Board Ass'y

Note:
The Specific symbols (赤, 黒, 白, . . . etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X601	2SC1775AV(F1)	0.2 W	200 MHz	Silicon	Hitachi
X602	2SC1775AV(F1)	"	"	"	"
X603	2SC1775AV(F1)	"	"	"	"
X604	2SC1775AV(F1)	"	"	"	"
X605	2SA1084(E)	0.4 W	120 MHz	"	"
X606	2SA1084(E)	"	"	"	"
X607	2SA1084(E)	"	"	"	"
X608	2SA1084(E)	"	"	"	"
X609	2SA1084(E)	"	"	"	"
X610	2SA1084(E)	"	"	"	"
X611	2SC2546(E,F)	"	90 MHz	"	"
X612	2SC2546(E,F)	"	"	"	"
X613	2SC2546(E,F)	"	"	"	"
X614	2SC2546(E,F)	"	"	"	"
X615	2SC2235(Q,Y)	0.9 W	120 MHz	"	Toshiba
X616	2SC2235(Q,Y)	"	"	"	"
X617	2SA965(Q,Y)	"	"	"	"
X618	2SA965(Q,Y)	"	"	"	"
X619	2SD718LB(R,O)	80 W		"	"
X620	2SD718LB(R,O)	"		"	"
X621	2SB688LB(R,O)	"		"	"
X622	2SB688LB(R,O)	"		"	"
X701	2SC1775AV(F)	0.2 W	200 MHz	"	Hitachi
X702	2SC1775AV(F)	"	"	"	"
X703	2SA872AV(E)	0.3 W	120 MHz	"	"
X803	2SD313V(D,E)	30 W	8 MHz	"	Sanyo
X804	2SC458(C)	0.2 W	230 MHz	"	Hitachi

Integrated Circuits

Item No.	Part Number	Rating	Description	
		Pc		Maker
IC601	VC5022		I.C.	Toyodengu
IC602	VC5022		"	"
IC701	TA7317P	0.5 W	"	Toshiba
IC901	TA7318P(2)	0.7 W	"	"

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D601	1S2076-31		Silicon	Hitachi
D602	1S2076-31		"	"
D603	RD9.1EB3		Silicon (Zener)	NEC
D701	1S2076-31		Silicon	Hitachi
D703	ERB12-02RKL1		"	Fuji
D801	30D2FA-S		"	Nihon Inter.
D802	30D2FA-S		"	"
D803	30D2FA-S		"	"
D804	30D2FA-S		"	"
D805	EQB01-15Z		Silicon (Zener)	Fuji
D806	EQB01-15Z		"	"
D807	RD13EB3		"	NEC

Coils

Item No.	Part Number	Rating	Description
L601	E04059-1R2	1.2 μH	Choke Coil
L602	E04059-1R2	"	"

Capacitors

Item No.	Part Number	Rating		Description
C501	QET51ER-106	10 μF	25 V	Electrolytic
C502	QET51ER-106	"	"	"
C503	QFM31HK-222	2200 pF	50 V	Mylar
C504	QFM31HK-222	"	"	"
C505	QFM31HK-223	0.022 μF	"	"
C506	QFM31HK-223	"	"	"
C507	QFM31HK-333	0.033 μF	"	"
C508	QFM31HK-333	"	"	"
C509	QFM31HK-224	0.22 μF	"	"
C510	QFM31HK-224	"	"	"
C511	QFM31HK-332	3300 pF	"	"
C512	QFM31HK-332	"	"	"
C513	QCS21HJ-331	330 pF	"	Ceramic
C514	QCS21HJ-331	"	"	"
C601	QET51HR-225	2.2 μF	"	Electrolytic
C602	QET51HR-225	"	"	"
C603	QCS21HJ-471	470 pF	"	Ceramic
C604	QCS21HJ-471	"	"	"
C605	QET51CR-476	47 μF	16 V	Electrolytic
C606	QET51CR-476	"	"	"
C607	QCS21HJ-100	10 pF	50 V	Ceramic
C608	QCS21HJ-100	"	"	"
C609	QFM31HK-332	3300 pF	"	Mylar
C610	QFM31HK-332	"	"	"
C611	QFM31HK-103	0.01 μF	"	"
C612	QFM31HK-103	"	"	"
C613	QCS21HJ-181	180 pF	"	Ceramic
C614	QCS21HJ-181	"	"	"
C615	QCS21HJ-181	"	"	"
C616	QCS21HJ-181	"	"	"
C617	QCS21HJ-151	150 pF	"	"
C618	QCS21HJ-151	"	"	"
C619	QFM31HK-473	0.047 μF	"	Mylar
C620	QFM31HK-473	"	"	"
C621	QET51HR-107	100 μF	"	Electrolytic
C622	QET41HR-107	"	"	"
C623	QCS21HJ-121	120 pF	"	Ceramic
C624	QCS21HJ-121	"	"	"
C625	QCS21HJ-101	100 pF	"	"
C626	QCS21HJ-101	"	"	"
C701	QET51AR-107	100 μF	10 V	Electrolytic
C702	QET51ER-226	22 μF	25 V	"
C703	QET51HR-225	2.2 μF	50 V	"
C704	QET51ER-226	22 μF	25 V	"
C801	QEZ0057-878	8700 μF	56 V	Electrolytic
C802	QEZ0057-878	"	"	"
C803	QFM32AK-104	0.1 μF	100 V	Mylar
C804	QCE22HP-103	0.01 μF	500 V	Ceramic
C805	QET51CR-226	22 μF	16 V	Electrolytic
C806	QET51CR-226	"	"	"
C901	QET51HR-105H	1 μF	50 V	Electrolytic
C902	QET51HR-105H	"	"	"
C903	QFM31HK-103	0.01 μF	"	Mylar
C904	QFM31HK-103	"	"	"
C905	QET51HR-474H	0.47 μF	"	Electrolytic

Resistors

Item No.	Part Number	Rating		Description
R501	QRD141J-823S	82 kΩ	1/4 W	Carbon
R502	QRD141J-823S	"	"	"
R503	QRD141J-182S	1.8 kΩ	"	"
R504	QRD141J-182S	"	"	"
R505	QRD141J-123S	12 kΩ	"	"
R506	QRD141J-123S	"	"	"
R507	QRD141J-182S	1.8 kΩ	"	"
R508	QRD141J-182S	"	"	"
R509	QRD141J-561S	560 Ω	"	"
R510	QRD141J-561S	"	"	"
R511	QRD141J-562S	5.6 kΩ	"	"
R512	QRD141J-562S	"	"	"
R513	QRD141J-472S	4.7 kΩ	"	"
R514	QRD141J-472S	"	"	"
R515	QVD7A2C-215V	100 kΩ		Variable
R516	QVD7A2C-215V	"		"
R601	QRD141J-222S	2.2 kΩ	1/4 W	Carbon
R602	QRD141J-222S	"	"	"
R603	QRD141J-104S	100 kΩ	"	"
R604	QRD141J-104S	"	"	"
R605	QRD141J-272S	2.7 kΩ	"	"
R606	QRD141J-272S	"	"	"
R607	QRD141J-272S	"	"	"
R608	QRD141J-272S	"	"	"
R609	QRD141J-331S	330 Ω	"	"
R610	QRD141J-331S	"	"	"
R611	QRD141J-472S	4.7 kΩ	"	"
R612	QRD141J-472S	"	"	"
R613	QRD149J-101S	100 Ω	"	" ⚠
R614	QRD149J-101S	"	"	" ⚠
R615	QRD141J-391S	390 Ω	"	"
R616	QRD141J-391S	"	"	"
R617	QRD141J-203S	20 kΩ	"	"
R618	QRD141J-203S	"	"	"
R619	QRD141J-242S	2.4 kΩ	"	"
R620	QRD141J-242S	"	"	"
R621	QRD141J-242S	"	"	"
R622	QRD141J-242S	"	"	"
R623	QRD149J-181S	180 Ω	"	" ⚠
R624	QRD149J-181S	"	"	" ⚠
R625	QRD149J-181S	"	"	" ⚠
R626	QRD149J-181S	"	"	" ⚠
R627	QVP4A0B-221	220 Ω		Variable
R628	QVP4A0B-221	"		"
R629	QRD141J-331S	330 Ω	1/4 W	Carbon
R630	QRD141J-331S	"	"	"
R631	QRD141J-122S	1.2 kΩ	"	"
R632	QRD141J-122S	"	"	"
R633	QRD141J-104S	100 kΩ	"	"
R634	QRD141J-104S	"	"	"
R635	QRD141J-821S	820 Ω	"	"
R636	QRD141J-821S	"	"	"
R637	QRD149J-100S	10 Ω	"	" ⚠
R638	QRD149J-100S	"	"	" ⚠
R639	QRD149J-271S	270 Ω	"	" ⚠
R640	QRD149J-271S	"	"	" ⚠
R641	QRD149J-100S	10 Ω	"	" ⚠
R642	QRD149J-100S	"	"	" ⚠
R643	ERF032K-R22	0.22 Ω	3 W	Uninflammable
R644	ERF032K-R22	"	"	"
R645	QRG017J-150S	15 Ω	1 W	Oxide metal film ⚠
R646	QRG017J-150S	"	"	" ⚠
R647	QRD129J-221	220 Ω	1/2 W	Carbon ⚠
R648	QRD129J-221	"	"	" ⚠
R651	QRD141J-472S	4.7 kΩ	1/4 W	"
R653	QRD149J-101S	100 Ω	"	" ⚠
R654	QRD149J-101S	"	"	" ⚠
R661	SDT35	350 Ω	1 W	Varister
R662	SDT35	"	"	"
R671	QRD129J-4R7	4.7 Ω	1/2 W	Carbon ⚠

Resistors

Item No.	Part Number	Rating		Description
R672	QRD129J-4R7	4.7 Ω	1/2 W	Carbon ⚠
R701	QRD141J-122S	1.2 kΩ	1/4 W	"
R702	QRD141J-122S	"	"	"
R703	QRD141J-681S	680 Ω	"	"
R704	QRD141J-681S	"	"	"
R705	QRD141J-104S	100 kΩ	"	"
R706	QRD141J-104S	"	"	"
R706	QRD141J-123S	12 kΩ	"	"
R708	QRD141J-123S	"	"	"
R709	QRD141J-103S	10 kΩ	"	"
R710	QRD141J-104S	100 kΩ	"	"
R711	QRD141J-473S	47 kΩ	"	"
R712	QRD141J-683S	68 kΩ	"	"
R713	QRD141J-274S	270 kΩ	"	"
R714	QRD141J-472S	4.7 kΩ	"	"
R715	QRG017J-681S	680 Ω	1 W	Oxide metal film ⚠
R716	QRD141J-332S	3.3 kΩ	1/4 W	Carbon
R717	QRD141J-153S	15 kΩ	"	"
R718	QRD141J-123S	12 kΩ	"	"
R719	QRD141J-224S	220 kΩ	"	"
R720	QRD149J-100S	10 Ω	"	" ⚠
R721	QRD149J-100S	"	"	" ⚠
R801	QRG017J-821S	820 Ω	1 W	Oxide metal film
R802	QRG017J-821S	"	"	"
R803	QRD141J-820S	82 Ω	1/4 W	Carbon
R804	QRD141J-820S	"	"	"
R811	QRD141J-472S	4.7 kΩ	"	"
R812	QRD149J-180S	18 Ω	"	"
R820	QRD141J-683S	68 kΩ	"	" ⚠
R821	QRD141J-334S	330 kΩ	"	"
R901	QRD141J-104S	100 kΩ	"	"
R902	QRD141J-104S	"	"	"
R903	QRD141J-623S	62 kΩ	"	"
R904	QRD141J-623S	"	"	"
R905	QRD141J-102S	1 kΩ	"	"
R906	QRD141J-102S	"	"	"
R907	QVP4A0B-102	"		Variable
R908	QVP4A0B-102	"		"
R909	QRG017J-102S	"	1 W	Oxide metal film ⚠
R911	QRD141J-273SY	27 kΩ	1/4 W	Carbon
R913	QRD141J-182SY	1.8 kΩ	"	"
R914	QRD141J-203SY	20 kΩ	"	"
R915	QRD141J-113SY	11 kΩ	"	"
R917	QRD129J-471	470 Ω	1/2 W	" ⚠

Others

Item No.	Part Number	Rating	Description
	E65119-002		Screw
S601	QSP0023-008		Push Switch
	QMS6302-105		Head Phone Jack
	QMV5005-003		3 pin Plug Ass'y
RY-701	ESK6D24-213		Relay Switch
	EWS012-039		2 Pin Socket Wire Ass'y
	EWS075-003		5 Pin Socket Wire Ass'y
	EWS075-004		5 Pin Socket Wire Ass'y
	E66998-003		IC CAP.
	E03572-007EJ		Speaker Terminal
	E300942-001		Heat Sink
	E43727-001		Tab
	E61537-001		Heat Sink
	E67292-001		Heat Sink Bracket (Left)
	E67293-001		Heat Sink Bracket (Right)
	E67294-001		Clip (X613, 614)

⚠ : Safety parts

8-(2) TXX-240 Tone Controls & Other Select Switches Split P.C. Board Ass'y

The number of TXX-240□ varies according to the areas employed. See below table.

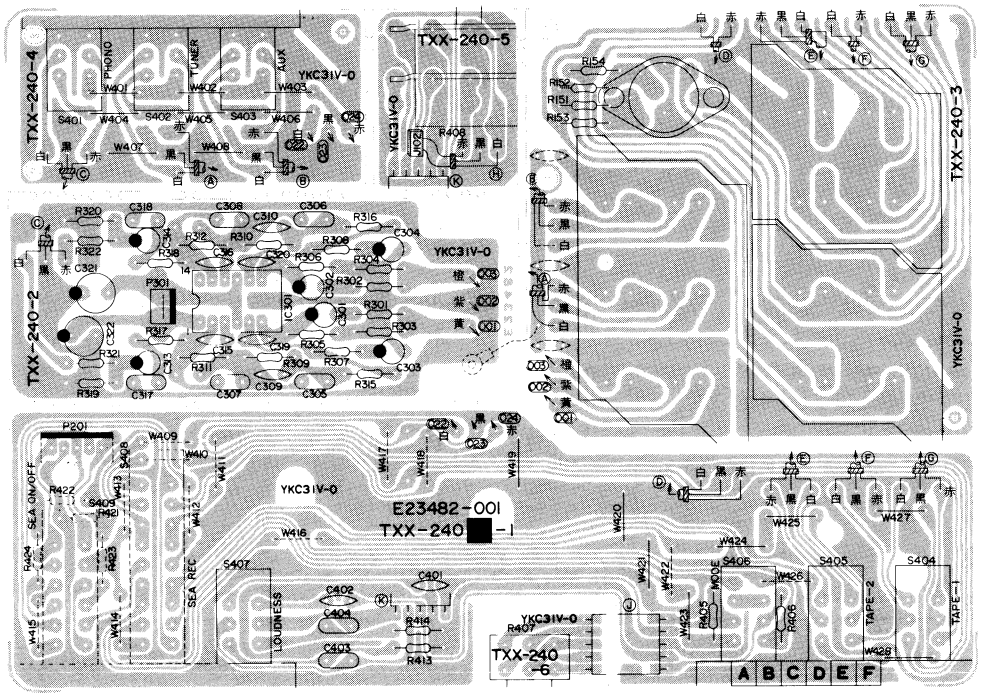


Fig. 11

Each Individual P.C. Board Location

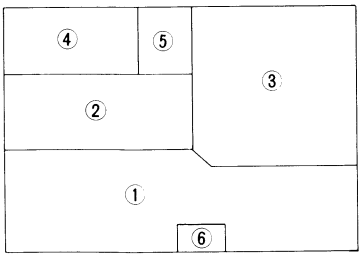


Fig. 12

① TXX-240□-1 : Tape Select & Loudness Switch P.C. Board Ass'y
② TXX-240-2 : Equalizer Amp. P.C. Board Ass'y
③ TXX-240□-3 : Pin Jack P.C. Board Ass'y
④ TXX-240-4 : Source Selector Switch P.C. Board Ass'y
⑤ TXX-240-5 : Main Volume P.C. Board Ass'y
⑥ TXX-240-6 : Balance Control P.C. Board Ass'y

Note:
In □ should be indicated an area code according to the table shown below when placing an order.

Designated Areas	P.C. Board Ass'y
U.S.A. & Canada	TXX-240 C -1, 3
All Other Areas	TXX-240 D -1, 3

Note:
The Specific symbols (赤, 黒, 白, . . . etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

Integrated Circuit

Item No.	Part Number	Rating	Description	
		Pc		Maker
IC301	HA1452W	0.54 W	I.C.	Hitachi

Capacitors

Item No.	Part Number	Rating		Description
C301	QET51HR-475	4.7 μF	50 V	Electrolytic
C302	QET51HR-475	"	"	"
C303	QET51AR-476	47 μF	10 V	"
C304	QET51AR-476	"	"	"
C305	QFM31HJ-182	1800 pF	50 V	Mylar
C306	QFM31HJ-182	"	"	"
C307	QFM31HJ-332	3300 pF	"	"
C308	QFM31HJ-332	"	"	"
C309	QCS21HJ-121	120 pF	"	Ceramic
C310	QCS21HJ-121	"	"	"

Capacitors

Item No.	Part Number	Rating		Description
C311	QFM31HJ-332	3300 pF	50 V	Mylar
C312	QFM31HJ-332	"	"	"
C313	QET51HR-475	4.7 μF	"	Electrolytic
C314	QET51HR-475	"	"	"
C315	QCS21HJ-151	150 μF	"	Ceramic
C316	QCS21HJ-151	"	"	"
C317	QFM31HK-332	3300 pF	"	Mylar
C318	QFM31HK-332	"	"	"
C319	QCS21HJ-101	100 pF	"	Ceramic
C320	QCS21HJ-101	"	"	"
C321	QET51CR-107	100 μF	16 V	Electrolytic
C322	QET51CR-107	"	"	"
C401	QCS21HJ-221	220 pF	50 V	Ceramic
C402	QCS21HJ-221	"	"	"
C403	QFM31HK-333	0.033 μF	"	Mylar
C404	QFM31HK-333	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R151	QRD141J-823SY	82 kΩ	1/4 W	Carbon (Except U.S.A. & Canada)
R152	QRD141J-823SY	"	"	"
R153	QRD141J-334SY	330 kΩ	"	"
R154	QRD141J-334SY	"	"	"
R301	QRD141J-222SY	2.2 kΩ	"	Carbon
R302	QRD141J-222SY	"	"	"
R303	QRD141J-104SY	100 kΩ	"	"
R304	QRD141J-104SY	"	"	"
R305	QRD141J-104SY	"	"	"
R306	QRD141J-104SY	"	"	"
R307	QRD141J-821SY	820 Ω	"	"
R308	QRD141J-821SY	"	"	"
R309	QRD141J-393SY	39 kΩ	"	"
R310	QRD141J-393SY	"	"	"
R311	QRD141J-474SY	470 kΩ	"	"
R312	QRD141J-474SY	"	"	"
R315	QRD141J-122SY	1.2 kΩ	"	"
R316	QRD141J-122SY	"	"	"
R317	QRD141J-470SY	47 Ω	"	"
R318	QRD141J-470SY	"	"	"
R319	QRD141J-104SY	100 kΩ	"	"
R320	QRD141J-104SY	"	"	"
R321	QRD141J-471SY	470 Ω	"	"
R322	QRD141J-471SY	"	"	"
R405	QRD141J-562SY	5.6 kΩ	"	"
R406	QRD141J-562SY	"	"	"
R407	QVD7A2M-1F5V	250 kΩ		Variable (Balance)

Resistors

Item No.	Part Number	Rating		Description
R408	QVC4A2B-AF5V	250 kΩ		Variable (Master Volume)
R413	QRD141J-223SY	22 kΩ	1/4 W	Carbon
R414	QRD141J-223SY	"	"	"
R421	QRD141J-104SY	100 kΩ	"	"
R422	QRD141J-331SY	"	"	"
R423	QRD141J-331SY	330 Ω	"	"
R424	QRD141J-331SY	"	"	"

Others

Item No.	Part Number	Rating	Description
S401	QSP0023-011		Push Switch
S404	QSP0023-010		"
S407	QSP0219-051		"
	EWR35A-10NN		Flat Wire
	EWR35A-15NN		Flat Wire
	EWS013-039		3 pin Socket Wire Ass'y
	E03591-42D		4 pin Pin Jack
	E03591-62D		6 pin Pin Jack
	E03623-003		DIN Socket (Exept U.S.A. & Canada)
	QMV5005-002		2 pin Plug Ass'y

8-(3) TPS-255B AC Fuse P.C. Board Ass'y

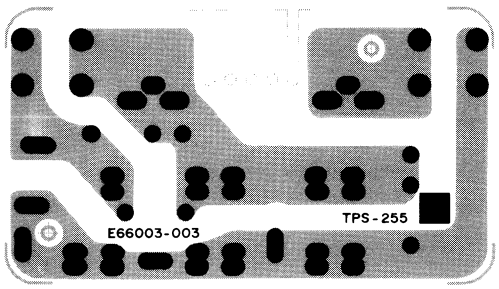


Fig. 13

for U.S.A. & Canada

Item No.	Part Number	Rating	Description
C001	QCZ9014-103A	0.01 μF 125 V	Ceramic ⚠
	QMC0637-003		AC Outlet ⚠
	E03675-004		Fuse Clip ⚠
	E43727-001		Tab (⊥)
	E65508-001		Tab (⊥)

8-(4) TPS-277 AC Fuse P.C. Board Ass'y

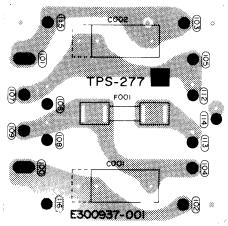


Fig. 14A

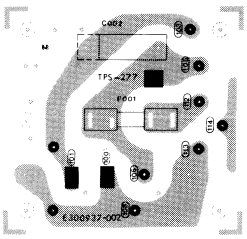


Fig. 14B

TPS-277C: for Europe
TPS-277DBS: for U.K.

TPS-277G: for Australia & Europe
TPS-277HBS: for U.K.

Description	Part Number	
	TPS-277C, TPS-277G	TPS-277DBS, TPS-277HBS
Capacitor ⚠	QFZ9010-103 (0.01 μF/250 V~)	QFZ9010-103BS (0.01 μF/250 V~)
Tab (⊥)	E43727-002	E43727-002
Tab (⊥)	E65508-001	E65508-001
Fuse Clip ⚠	E48965-002	E48965-002
Fuse LABEL ⚠	E67132-T1R0	E67132-T1R0

8-(5) TPS-234A AC Voltage Selector P.C. Board Ass'y

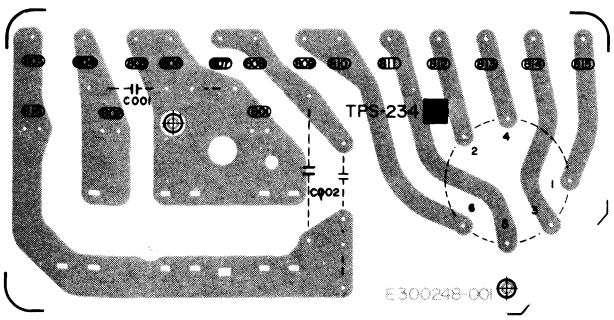


Fig. 15

for All Other Areas

Capacitor

Item No.	Part Number	Rating	Description
C001/002	QFH53BM-103	0.01 μF AC500 V	Film Capacitor ⚠

Others

Item No.	Part Number	Rating	Description
	QMC0637-003		AC Outlet ⚠
	E03675-004		Fuse Clip ⚠
	E43727-001		Tab (⊥)
	E65508-001		Tab (⊥)
	QSR0085-001		Voltage Selector ⚠

⚠ : Safety parts

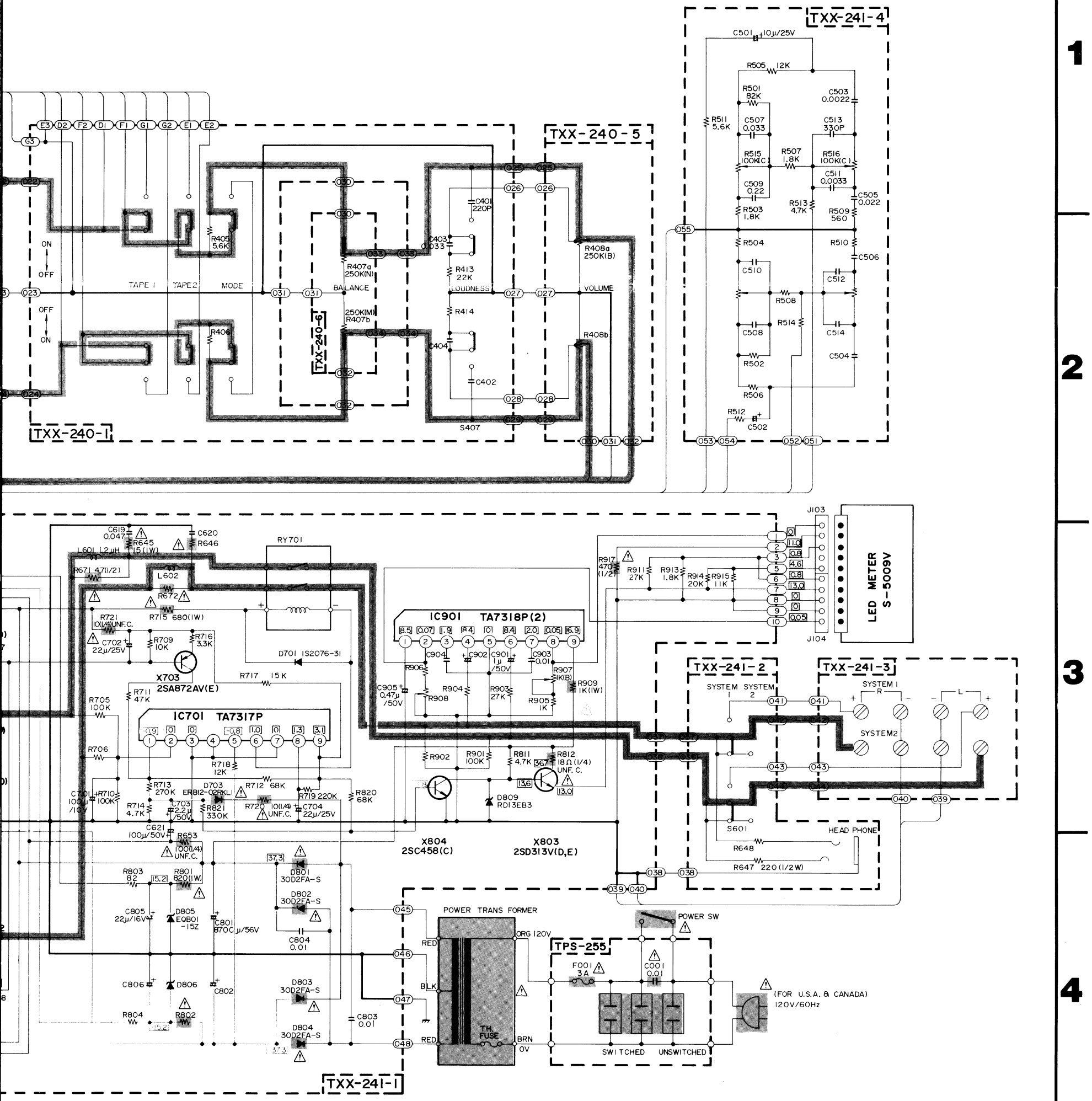
9. A-X1 Schematic Diagram

Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TXX-240	Power Amp., Volume Control & Other Function Split P.C. Board Ass'y	5
TXX-241C	Tone Controls & Other Select Switches Split P.C. Board Ass'y	8
TPS-255B	AC Fuse P.C. Board Ass'y	9
TPS-277	AC Fuse P.C. Board Ass'y	9
TPS-234A	AC Voltage Selector P.C. Board Ass'y	9

Notes:

1. Voltage values in ▭ are positive.
2. Voltage values in ▭ are negative.
3. —— indicates positive B power supply.
4. —— indicates negative B power supply.
5. ▬ indicates signal path.
6. When replacing the parts in the darkened area (▬) and those marked with ⚠, be sure to use the designated parts to ensure safety.
7. Parts in
8. This is t
   The des
   notice.



values in ▭ are positive.
values in ▭ are negative.
ndicates positive B power supply.
ndicates negative B power supply.
ndicates signal path.
eplacing the parts in the darkened area (▒) and
harked with ⚠, be sure to use the designated parts
re safety.

7. Parts in red indicate transistors or ICs.
8. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

SEE BACK PAGE

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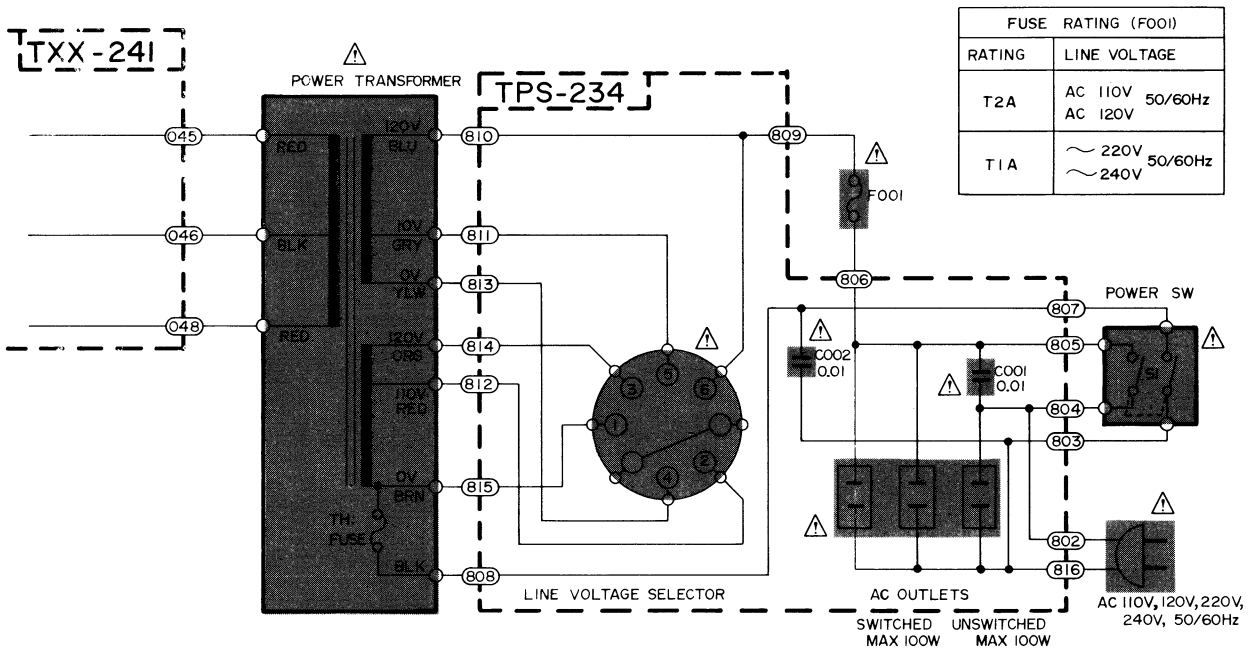
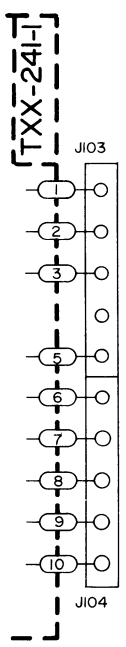
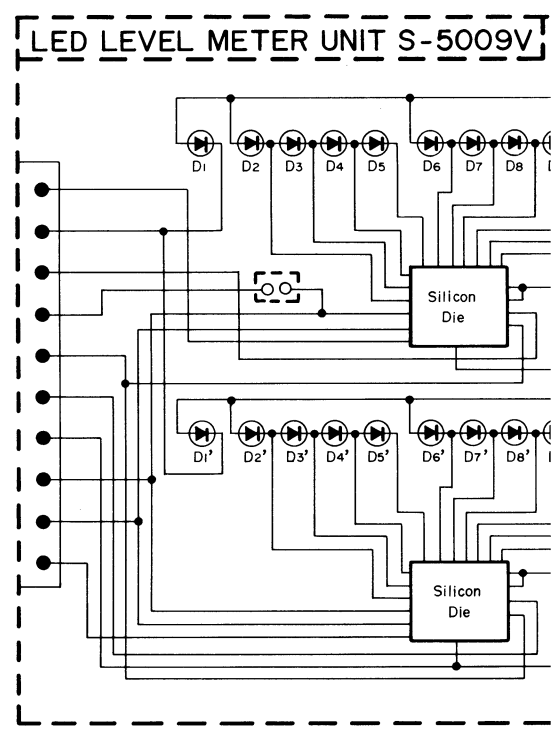
FOR OTHER COUNTRIES

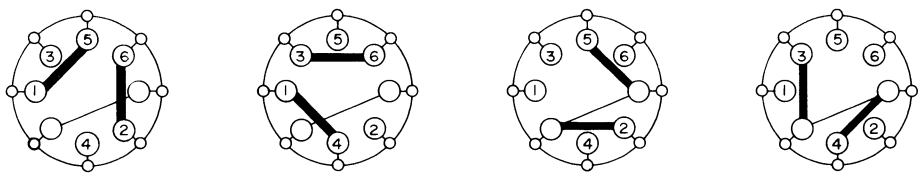


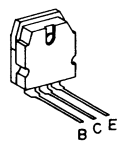
FUSE RATING (F001)	
RATING	LINE VOLTAGE
T2A	AC 110V 50/60Hz AC 120V
T1A	~ 220V 50/60Hz ~ 240V



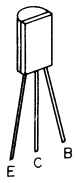


VOLTAGE SELECTOR CONNECTION

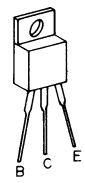




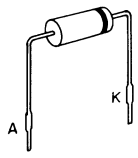
2SD718LB(R,O) X619, 620
2SB688LB(R,O) X621, 622



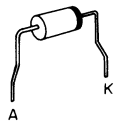
2SC1775AV(F1)	X601~604
2SA1084(E)	X605~610
2SC2546(E,F)	X611~614
2SC2235(O,Y)	X615,616
2SA965(O,Y)	X617,618
2SC1775AV(F)	X701, 702
2SA872AV(E)	X703
2SC458(C)	X804



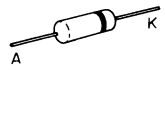
2SD313V(D,E) X803



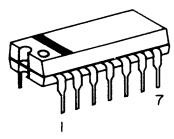
30D2FA-S
D801~804



ERB12-02RKLI
D703



IS2076-31	D601,602,701
RD9.1EB3	D603
EQB01-15Z	D805,806
RDI3EB3	D809
RD24EB3	D807, 808



HA1452W
IC301

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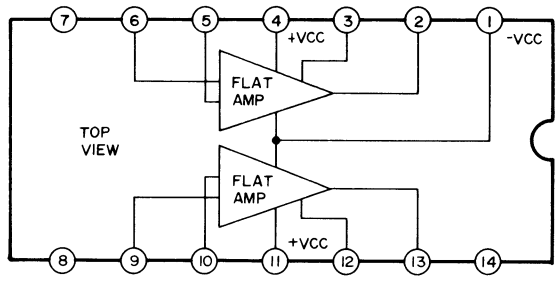
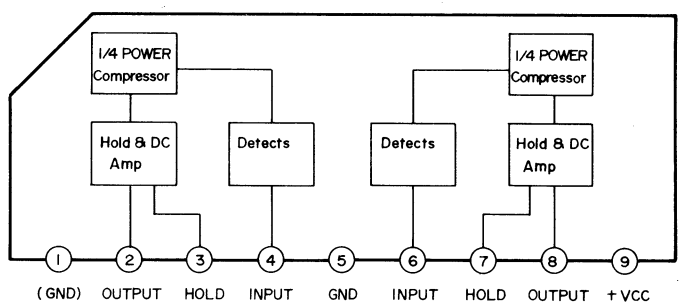
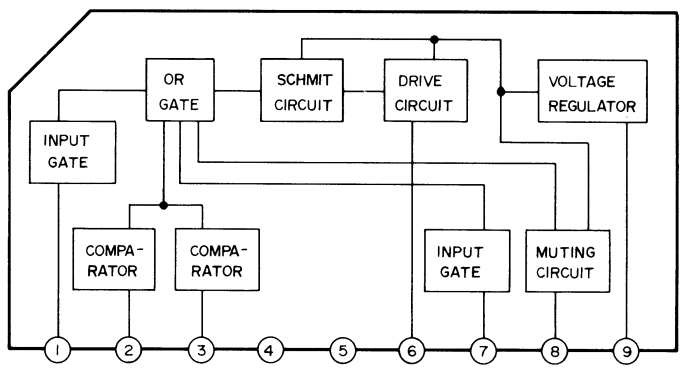
EQ. IC IC301 HA1452W



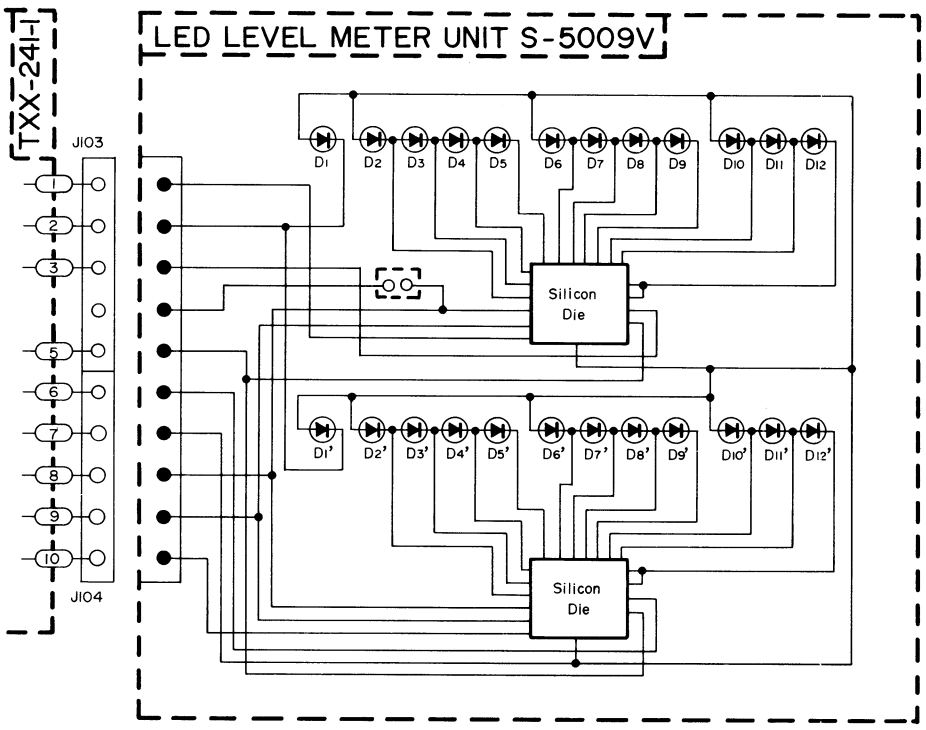
COMPRESSION IC IC901 TA7318P(2)

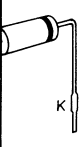


PROTECTOR IC IC701 TA7317P

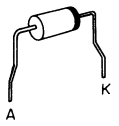


LED LEVEL METER UNIT S-5009V



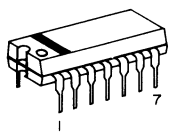


02FA-S
D801~804

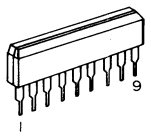


ERB12-02RKL1
D703

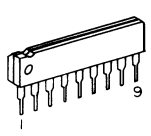
IS2076-31 D601,602,701
RD9.1EB3 D603
EQB01-15Z D805,806
RD13EB3 D809
RD24EB3 D807, 808



HA1452W
IC301



TA7317P
IC701
TA7318P(2)
IC901



VC5022
IC601, 602

10. Accessories List

Item No.	Part Number	Description	Q'ty
1	E30580-830A	Instruction Book (for U.K., E30580-830ABS)	1
2	See below	Warranty Card	1
3	E41202-2	Envelope for Instruction Book & Warranty Card	1
4	BT20042	"Does it Better" (for U.S.A. only)	1
5	QMF51A2-1R0L or 2R0L	Fuses (for Other Countries)	1
6	E64208-001	Envelope for Fuses (for Other Countries)	1
7	E67142-T1R0 or T2R0	Fuse Label (for Other Countries)	1
8	E64216-002	Caution Tag for Power Cord (for Other Countries)	1

Warranty Card

U.S.A	Canada	U.K	Europe	Australia
BT20032B	BT20025C	BT20013C	–	BT20029B

11. Packing Materials and Part Numbers

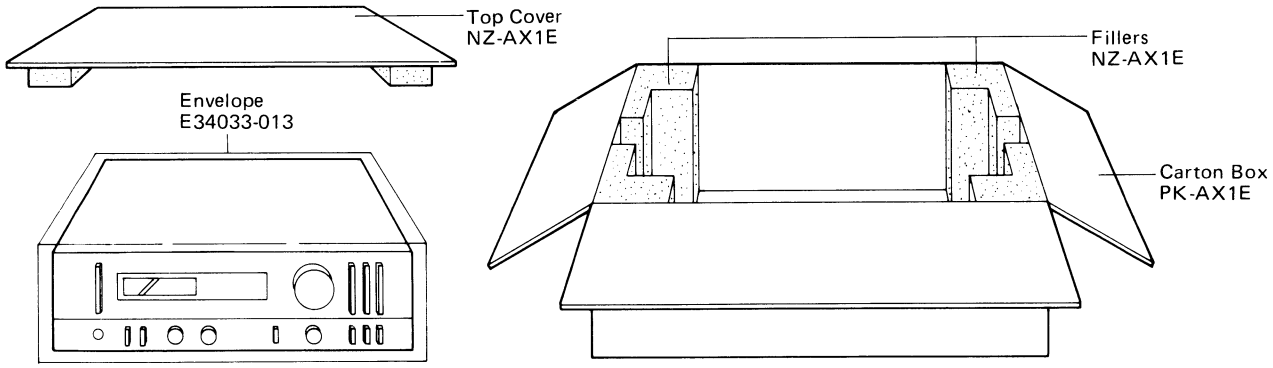


Fig. 16

12. Parts List with Specified Numbers for Designated Areas

Page	Item No.	Description	U.S.A	Canada	U.K.	Europe	Australia	Other Countries
2, 3		Power Transformer ⚠	E03077-56B	E03077-56D	E03077-56EBS	E03077-56E	E03077-56E	E03077-56C
2, 3	S1	Power Switch ⚠	QSP1110-301	QSP1110-301	See Back Page	See Back Page	See Back Page	QSP2110-004
8	8-(2)	Equalizer & Select Switch P.C. Board Ass'y	TXX-240C	TXX-240C	TXX-240D	TXX-240D	TXX-240D	TXX-240D
2, 3		Rear Panel	E23474-001	E23474-001	See Back Page	See Back Page	See Back Page	E23474-003
9	8-(3)	AC Fuse & Voltage Selector P.C. Board Ass'y ⚠	TPS-255B	TPS-255B	TPS-277DBS	TPS-277C	TPS-277C	TPS-234A
		Power Cord ⚠	QMP1200-200	QMP1200-200	QMP9017-008BS	QMP3900-200	QMP2560-244	QMP7600-250
9	F001	Fuse (Primary) ⚠	QMF61U1-3R0 (3.0A)	QMF61U1-3R0 (3.0A)	QMF51A2-1R0LBS (T1.0A)	QMF51A2-1R0L (T1.0A)	QMF51A2-1R0L (T1.0A)	QMF51A2-1R0L (T1.0A) or QMF51A2-2R0L (T2.0A)
		Fastener	–	–	E34455-001	E34455-001	E34455-001	–
		Fuse Socket ⚠	–	–	–	–	–	QMG0301-003

⚠ : Safety parts

Power Specifications

Area	Line Voltage & Frequency	Power Consumption
U.S.A. & Canada	AC 120 V, 60 Hz	180 W
Europe	AC 220 V∿, 50 Hz	330 W
U.K. & Australia	AC 240 V∿, 50 Hz	330 W
Other Countries	AC 110/120/220/240 V∿ selectable, 50/60 Hz	330 W

Warning! : Before servicing, check serial number at first.

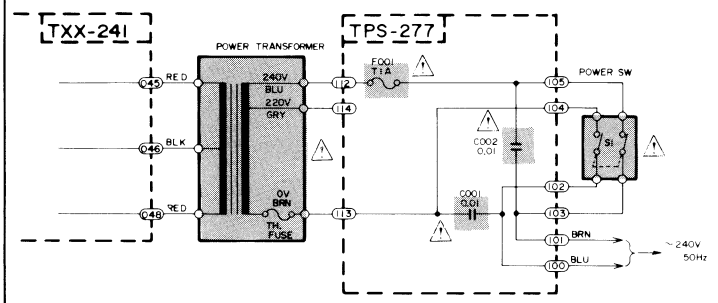
The numbers shown in table are pointed out the last five digits of the serial number located on the rear panel.
For example, 08026 → □□□08026

Description \ No.	U.K.		Europe		Australia
	00001–02010	over 02011	00001–04035	over 04036	over 00001
Power Switch ⚠ AC Fuse P.C. Board Ass'y ⚠ Power Supply Schematic Diagram (Refer to the below)	QSP2110-004BS TPS-277DBS A	QSP1110-305BS TPS-277HBS B	QSP2110-004 TPS-277C C	QSP1110-305 TPS-277G D	QSP1110-305 TPS-277G B

Power Supply Schematic Diagram

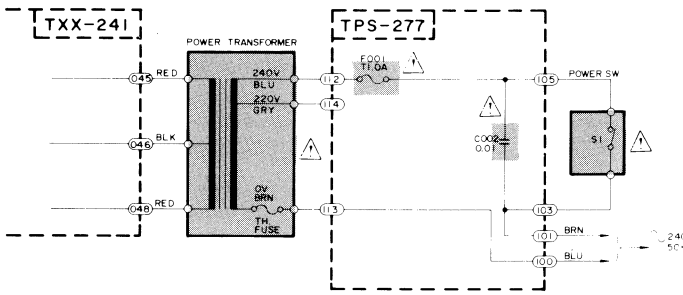
A

FOR U.K.



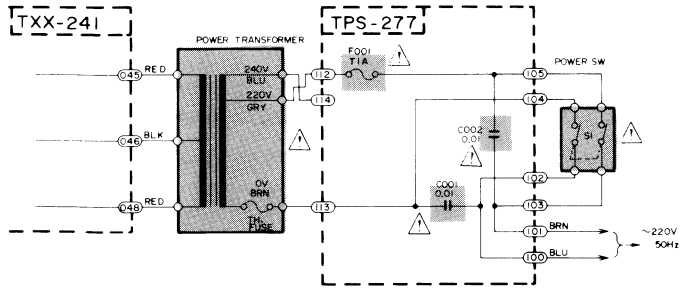
B

FOR U.K. AND AUSTRALIA



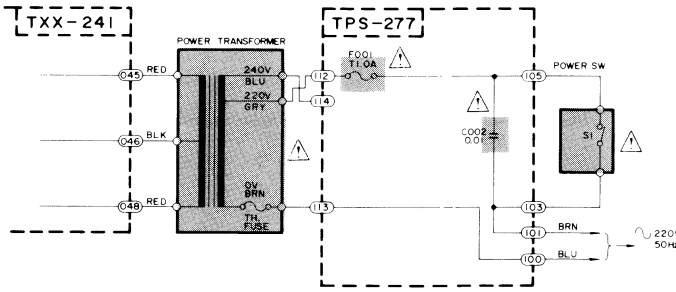
C

FOR EUROPE



D

FOR EUROPE



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